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ENVIRONMENTAL QUALITY

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Dirk Kempthorne, Governor  
C. Stephen Allred, Director

August 31, 2000

Ms. Kathleen Hain, Manager  
Environmental Restoration Program  
U.S. Department of Energy  
Idaho Operations Office  
850 Energy Drive  
Idaho Falls, Idaho 83401-1563

**RE: *Draft Remedial Investigation/Feasibility Study Work Plan for the Operable Unit 3-14  
Tank Farm Soil and Groundwater***

Dear Ms. Hain:

The Idaho Department of Environmental Quality (IDEQ) has completed its review of the above-referenced document, and provides the enclosed comments. Both general and specific comments are included. IDEQ did not review the Health and Safety Plan.

IDEQ received the draft work plan on June 27, 2000. As you are aware, we chose to extend the review period for 20 days as allowed by Section 8.13 of the Federal Facility Agreement/Consent Order (and documented in the August 10, 2000 letter from D. Nygard regarding the extension).

I look forward to working with your staff to address these comments during the 45 day resolution period. If you have any questions regarding these comments, please contact me at (208) 373-0306.

Sincerely,

Margie English  
WAG 3 Manager  
IDEQ Technical Services Group

ME/jc

cc: Talley Jenkins, USDOE-ID  
Kathy Ivy, USEPA Region X  
Jeff Fromm, DEQ Technical Services Group  
Daryl Koch-DEQ WMRD  
Eileen Loerch, DEQ Technical Services Group  
Gerry Winter, DEQ Technical Services Group  
Dennis Romankowski, Encore Environmental, Inc.

Enclosure

**IDEQ Technical Review Comments on the draft Remedial  
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**General Comment**

- 1) The DEQ received department status on July 1, 2000. Please perform a global check of the document to replace current references to "IDHW" or "IDHW-DEQ" with "IDEQ." Historical references do not need to be changed.

**Specific Comments**

- 2) **Section 1.1, Page 1-4, Paragraph 6, Last Sentence**

"Tanks WM-182 and WM-182..." Second entry probably should be WM-183, per the text provided later in the document.

- 3) **Section 1.1, Page 1-5, First Paragraph**

As an Introduction and Background discussion, it is suggested that the reader be provided an accurate account of the injection well's history, including the various failure events, and use of the alternate, temporary USGS well. Please revise text to include a concise description of the subsurface contributions from this/ these source(s). This same recommendation also would enhance the CPP-03 (a.k.a. CPP-23) entry within Table 1-1 on Page 1-8, and the text contained in the first paragraph of Page 1-11.

- 4) **Section 1, Page 1-9, Figure 1-3**

It appears that the color labels for CPP-61 and CPP-81 have been switched on the figure.

- 5) **Section 1.3, Page 1-12, First bullet**

This section states "(2) recoring the sealed INTEC injection well....." Please clarify whether this is actually a "recoring" or whether this is the first time the well in this well will be cored. Should this be a "recoring", please state where data from the first coring can be found.

6) Section 1.3, *Tank Farm Soils*, Pages 1-12 through 1-13, General Comment

We suggest that a discussion of uncertainties be added to this section. Due to the number of times the Tank Farm has undergone "significant" excavation events throughout its history, and coupled with the multiple times the excavated soils have been "handled," (i.e., excavated, stockpiled, mixed/remixed, backfilled and compacted) use of the term "characterized" should be qualified. For instance, Table 1-1 provides concise summaries of the various historical releases/ leaks that are currently known. In many instances, when the spills/leaks were excavated (when they were documented), the source of the backfilled material was not identified nor was any description of the material given in the remedial records. Given this scenario, and multiplied by an unknown number of similar occurrences within the Tank Farm footprint, any general characterization statement made in a given location may only be representative of that particular parcel and not necessarily representative of an adjacent tract of soil ten feet away. This uncertainty will be factored into any risk management decisions made for this site.

7) Section 1.3, *Additional Sites from OU 3-13*, Page 1-13, Last Paragraph on Page

The text suggests that a task defined by the OU 3-14 RI/FS Scope of Work has been reassigned as part of the OU 3-13 remedial action. We do not agree with this statement. This work plan describes aquifer wells to be installed and sampled adjacent to, and downgradient of, the old injection well. These wells are also southwest (i.e., downgradient from) the tank farm. The objectives of the remedial investigation and remedial action are not identical. The RI seeks to characterize the nature and extent of aquifer contaminant source areas, primarily the CPP-03 (a.k.a. CPP-23) injection location. These data will be used to select a remedial action for the portion of the aquifer within the INTEC fence. In contrast, the purpose of the "fence line" monitoring under the OU 3-13 remedial action is to detect releases from INTEC which may not have been accounted for in the model, and which could affect the ability of the remedy to restore that portion of the aquifer outside the INTEC fence to beneficial use by 2095.

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8) Section 1.5.1, Page 1-16

Please delete the text stating that *“as each tank is successfully closed as a HWMA/RCRA interim status unit, the tank will administratively be transferred from HWMA/RCRA to CERCLA and become part of OU 3-14.”* IDEQ has not yet received or reviewed the first partial closure plan for the tank farm. Therefore, it is premature to make statements in the OU 3-14 RI Work Plan that have any administrative implications regarding tank system end states/post-closure care. IDEQ will not concur with such statements at this time.

9) Section 1.5.2, Page 1-16, Fourth Paragraph under Section Heading

Please replace *IDHW Division of Environmental Quality Hazardous Waste Permitting Bureau* with *IDEQ State Waste Management and Remediation Division*.

10) Section 1.5.2, Page 1-16, Fifth Paragraph under Section Heading

All piping is considered ancillary equipment to the tank farm system and will be addressed during closure pursuant to HWMA. Since IDEQ has not yet received or reviewed the first partial closure plan for the tank farm, it is premature to speculate on the end state of the HWMA closure and/or any required post closure care. IDEQ will not at this time concur with statements proposing to divide responsibilities between HWMA and CERCLA for buried pipes. These statements should be deleted from the document.

11) Section 1.5.3, Page 1-17, Second Paragraph under Section Heading, Last Sentence

Please see Comment #8.

12) Section 1.5.4, Page 1-17, First Paragraph, Last Sentence

Suggest adding the phrase “and implemented” to the “...final remedy for these sites is selected...” prior to ...” as part of the OU 3-14 RI/FS process”.

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**13) Section 2.1.2, Page 2-21 through 2.24**

Much of the information contained in this section describes proposed HWMA closure plans and is not appropriate for inclusion in this RI/FS work plan. Since IDEQ has not yet received or reviewed a closure plan for the tank farm, the discussion of the closure plan approach is premature and speculative. It is appropriate to include dates for closure activities that have been agreed to by the agencies, but please delete portions of the discussion describing specific activities that have not yet been approved.

**14) Section 2.3.2.1, Page 2-41, First Paragraph, Last Sentence**

On the basis of information provided to IDEQ from USDOE in January, 2000 and March, 2000, the PEW system listed hazardous wastes were discharged to the CPP-03 (a.k.a. CPP-23) well, thereby contaminating the aquifer in the vicinity of the injection well with 4 waste codes (F-001, F-002, F-005, and U-134).

**15) Section 3.1.4, Table 3-1, Pages 3-36 through 3-39**

The table of potential contaminants of concern should include hazardous substances, especially VOCs and metals. In particular, the CPP-03 (a.k.a. CPP-23) injection well should include a broad range of potential contaminants, given the lengthy usage period, and the variety of waste streams that were discharged to this well. The single sample of sludge material taken from the top of the casing collapse should not be considered representative of contamination that may exist in the closed well.

**16) Section 3.2.2, Page 3-46, Second Paragraph**

It is stated that Pu-241 and Pu-238 are not considered COPCs for the aquifer because their half-lives occur before the total plutonium peak concentration is reached in the year 3585. It would be better to say that they would each go through a number of half-lives before this year, resulting in aquifer concentrations below risk-based levels. It is also worth reiterating the rationale for lumping individual plutonium isotopes in the groundwater modeling. It is not clear which isotopes contribute most to the total plutonium risk, which will be unacceptable in the year 3585, but based on their half-lives, it appears that Pu-239 and/or Pu-240 would have to be the main contributors.

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17) Section 3.3.1, Page 3-47, Fourth Paragraph

It was stated previously that the rationale for creating OU 3-14 was that available information collected under OU 3-13 was insufficient for remedy selection. The OU 3-14 risk assessment, then, is an additional assessment to support remedial decisions, and is technically not a BRA.

18) Section 3.3.2.4, Page 3-49, Third Bullet

The logic for this statement is unclear. For example, Section 3.1.3.1 states that the decision to transfer Site CPP-61 to OU 3-14 was based on *"the uncertain amount of PCB contamination that may remain under the concrete pad."* Please explain how this uncertainty would be addressed by review of documented historical information. If historical information exists to answer this question, would it not have been presented during the previous OU 3-13 analysis? Additionally, it is not clear from Sections 3.1.3.2 and 3.1.3.3, specifically what are the data gaps for Sites CPP-81 and CPP-82. Until those data gaps have been identified and discussed, and the available historical information identified, we have no basis to agree that *"a final decision can be reached based on documented historical information."*

19) Section 3.3.2.5, Page 3-50, Fourth Bullet on Page

It is unclear why this is an "unresolved FS-related issue." Please explain. Additionally, please identify what is being done to address this bullet.

20) Section 4.1.1.3, Page 4-2

Please describe, in the text, how this assumption differs from assumptions used in the OU 3-13 FS, and the rationale for the change.

21) Section 4.1.2, RCRA/NEPA/CERCLA Integration, Pages 4-2 through 4-3

This section includes speculative assumptions regarding integration of the CERCLA remedial action with other regulatory program activities. Discussion of such integration activities is premature because there is no approved closure

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plan for the tank farm, and is beyond the scope of this RI Work Plan. Please delete any speculative language regarding tank farm end states.

22) Section 4.1.2, Area of Contamination, Page 4-3, Last Sentence

This sentence requires further clarification. Given that the OU 3-14 RI/FS sites are located within the INTEC fence line, it is unclear what "*pre-ROD investigation-derived waste generated from either surface or subsurface investigation outside the aforementioned AOC isopleth*" would include; please explain. In addition, please delete the reference to a no longer contained-in (NLCI) determination. There was no NCLI determination included in the OU 3-13 ROD.

23) Section 4.1.2, Operational Interfaces, Pages 4-3 through 4-4

Please add "*, depending upon contaminant concentrations*" to the end of the first sentence. Wells located in the immediate vicinity of CPP-03 (a.k.a. CPP-23) may be significantly more contaminated than OU 3-13 monitoring locations, and therefore purge/development waters may have additional storage/disposal requirements.

24) Section 4.1.2, Transuranic Waste, Page 4-5, Third Bullet, Third Sentence

The intent of this statement is unclear. The text states that it is *assumed that the HF in the waste has been treated to render it nonhazardous and any . . .* Has the waste been treated to render it nonhazardous for HF? If not, why would USDOE make the assumption that it has?

25) Section 4.2.2 (second 4.2.2), Page 4-7

The bullets under this section describing "Issues Related to the INTEC Injection Well...." should be expanded to include some details that might not be considered under the more generic "Nature and extent of contamination" or Feasibility study issues." The expansion should include bullet items related to presence or absence of any perched water, apparent saturation levels, presence of sediments or other materials in the fractured basalts attributable to past injection practices such that release mechanisms can at least be conceptualized.

26) **Section 4.1.2, Page 4-8, General Comment**

The following potential migration pathway should be addressed by the characterization methods. Since most of the major concrete vaults extend from approximately 10-15 feet bgs to the sediment/basalt interface (approximately 45 feet bgs), each one of the vaults are potential pathways for releases to migrate straight down to the top of fractured basalt. Since the known leaks and spills occurred outside of the vaults, it is reasonable to assume that the interface of the exterior of the concrete vault and the adjacent soils would serve as an excellent conduit for liquid migration. The degree of compaction of any of the backfill materials placed against the vault exterior during the two major excavation events, is not mentioned in the work plan. Essentially, this scenario could “short-circuit” the possible attenuation [provided by the soils/backfill materials, and the work plan sampling strategy does not currently address this migration pathway. This potential pathway should be incorporated into the sampling strategy.

27) **Section 4.1.2, Page 4-8, Second Bullet**

Bullet 2 describes the necessity of obtaining soil distribution coefficients (Kd's) for the COPCs. After review of the “stockpot” of native soils, imported backfill soils, and the checkerboard footprint of historical, anthropogenic activities within the Tank Farm Area, it is not clear to what extent the work plan addresses the representativeness of the soil samples for Kd evaluation. Please address this in the text.

28) **Section 4.3.2, Page 4-9**

More specificity should be provided regarding the data gaps and RI/FS should more clearly identify objectives for these three sites.

29) **Section 4.4.1.3, Page 4-11, First Paragraph, Last Sentence**

We suggest replacing “prevent” with “minimize.”

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30) Section 4.4.1.3, Page 4-11, Principle Study Questions

- a) PSQ-3: All contaminants are somewhat mobile; suggest that the PSQ be restated: "What is the extent of the mobility of each of the contaminants within each of the identified soil matrices?"
- b) AA-3 & A-4a: Same comment as above, different applications of the sorbed/mobile concept as it relates to moisture and flux.
- c) AA-4b: "Little moisture" and "significant horizontal flux"; suggest better, quantifiable terminology be used.

31) Section 4.4.1.4, Page 4-14, Inputs to PSQ-1a and 1b

Please provide more information regarding the ratio technique. Specifically, what information will be used to estimate the ratio of other radioactive contamination potentially present.

32) Section 4.4.1.5, Page 4-18, Fourth Paragraph on Page, Stage I

We suggest that Stage I be re-named "*Characterization Stage*" or "*Remedial Investigation Stage*" since it does not represent any remediation work conducted under operable unit 3-14. The text can state, if desired, that the OU 3-13 Group I interim action will be minimizing infiltration at the Tank Farm during this stage.

33) Section 4.4.1.6, Page 4-19, Develop a Decision Rule, DR-2b

- a) It is unclear why selected CLP metals are the only non-radionuclide contaminants identified. Other hazardous contaminants such as VOCs and SVOCs would be expected based on process knowledge (particularly in the > 5 foot depth).
- b) Thallium was omitted from the text and Table 4-1. Please add thallium.

34) Section 4.4.1.8, Page 4-20, Third Paragraph

Please see Comment #32 regarding use of the term *Remediation Stage I*.

35) Section 4.4.2.3, Pages 4-25 through 4-26, PSQ-3

The intent of the parenthetical statement is unclear. Sludge in CPP-03 (a.k.a. CPP-23) and groundwater from the new monitoring well adjacent to the injection well should be sampled for Appendix IX analytes (metals, VOCs, SVOCs, and PCBs) as well as radionuclides. The highest concentrations and the widest variety of contaminants should be expected in, and in the immediate vicinity of, the old injection well. Given that the nearest existing groundwater SRPA well is over 500 feet downgradient, sample results may differ considerably from previous groundwater results. As noted in the text, previous sludge samples taken from the top of the collapsed column in CPP-03 may not be representative of contaminants present in sludges at depth in the injection well. In addition, given that the injection well received numerous waste streams over a period of greater than 20 years, sampling results may differ from expectations based on process knowledge. Therefore, the source of groundwater contamination should be fully characterized, in accordance with USEPA's Groundwater Protection Strategy. Thorough characterization of the source area is needed to assess risks and to select an appropriate remedy under CERCLA.

36) Section 4.4.2.5, Page 4-31, Bulleted List

We suggest that Stage I description be reworded to state: *Core and sample sediments/sludges from the injection well*. As currently written, the text could suggest that all contaminated sediments in the well must be removed during Stage I.

37) Section 4.4.2.8, Page 4-32

- a) **fourth sentence:** It is indicated that cores from the well adjacent to CPP-03 (a.k.a. CPP-23) will be "*handled, stored, and analyzed by OU 3-13 Group 4.*" If so, please note that this activity must be included in OU 3-13 Group 4 plan documents, especially with respect to storage and waste handling.

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- b) **fifth sentence:** Samples should be analyzed for an Appendix IX list, rather than just the COPCs identified in the OU 3-13 ROD.
- c) **seventh sentence:** The agencies should discuss merits of the proposal to conduct leachability studies. At this time, we do not concur with this proposed activity for injection well sludge.

**38) Section 4.5.2, Page 4-36, Tank Farm Soils**

- a) **CPP-58E:** The text states, "The total activity is small and it should not contribute appreciably to the groundwater pathway." Please indicate the basis of this assertion.
- b) **CPP-27 and CPP-33:** The text states, "Contamination from the site(s?) Has not migrated to the 110 interbed." Please indicate the basis of this assertion.

**39) Section 4.5.2, Page 4-38, Paragraph 1**

The last sentence states that "The potential release rate for the contaminants from the sludge or contaminated aquifer materials is understood." Please clarify as this statement appears to be opposed to the last paragraph on this page where it is stated that leach and absorption studies will be performed. If the first statement is correct, please provide that information for review. If the second statement is correct, please modify the first statement.

**40) Section 4.5.2, Table 4-4, Page 4-42 & -43**

It is requested that the column entitled "How characterization meeting model requirement" be restated to "How characterization will meet model requirements."

**41) Section 4.6, Table 4-5, Page 4-44 & -45**

- a) Please define more clearly the difference between the columns labeled "Activities". It is not clear what differentiates activities listed in one column from another column.

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- b) The suggested "Annual Moisture Monitoring" is not frequent enough to allow development of an adequate data base to evaluate unsaturated zone flux. The numerous temporal variations in recharge to the unsaturated zone warrant more frequent monitoring. It is suggested for further discussion between the agencies that a frequency of monthly be considered.

42) Section 5.4, Page 5-7, Last Bullet

It should be stated whether the uncertainty analysis will be qualitative or quantitative. The wording about discussion of uncertainties suggests the former, which would be consistent with most previous risk assessments at INEEL.

43) Section 5.5.2, Page 5-8

At this time it is unclear whether treatability studies are needed. The need for treatability studies will be determined on the basis of data gathered during the RI characterization efforts. The referenced text should qualify that the treatability studies may, *or may not*, be needed based on Agency decisions following review of RI characterization sampling.

44) Section 6, Figure 6-1, Pages 6-3 through 6-8

The section should include both a working schedule (that provides for beating the enforceable milestones) and an enforceable/critical path schedule for project tasks and submission of documents.

45) Section 6.1, Page 6-1

- a) We recommend adding the line item identification from Figure 6-1 to the description of items in the bulleted list in this section. Doing so will provide clarification of whether the line items in the figure pertain to the tank farm soils, the CPP-03 (a.k.a. CPP-23) injection well, or both.
- b) **first bullet:** There appears to be words missing from the parenthetical. Please correct as appropriate.

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- c) **Additional Soil Sites Summary Report:** The text in section 3 indicates that this summary report will consist only of summarized historical information. If so, it is not clear why the summary report should take approximately one year (September 2001) to prepare and submit to the Agencies. As noted in Comment #18, we recommend that the data gaps be clearly identified and the agencies determine whether or not those data gaps can be filled by review of available historical data, prior to agreeing on a schedule for submittal of additional documents.
- d) **contaminant transport study:** The description of this item should also encompass work related to the CPP-03 (a.k.a. CPP-23) well contamination as noted in Section 5.5.1.

**46) Appendix G, General Comment**

Appendix G is a compilation of several important stand-alone documents. At a minimum, a Table of Contents listing all of the Appendix G documents should be included immediately after the Appendix G title page. In addition, it would be helpful for the reader if tabs were included to mark the various stand alone documents in this lengthy appendix.

**47) Appendix G, Section G-1**

It is unclear whether the supervisor's daily logs, occurrence reports, and published reports were used to identify sampling locations. As they provide valuable information on encountered releases, these documents should be used to help guide the Phase I effort.

**48) Appendix G, Tank Farm Soil FSP, Section 1.1, Page 1, Bullets 4, 5, and 6**

The references bullets are identified as objectives of this FSP, but do not appear to be discussed in the plan. Please provide some discussion regarding these objectives.

49) Appendix G, Tank Farm Soil FSP, Section 2.2.1, Page 15, Paragraph 1

The paragraph describes contamination attributed to CPP-629 but states that the soil contamination is located east of CPP-628. Figure 4 (Page 14) suggests that this contamination would be located in the vicinity of the Tank Farm which is confirmed in Table 4-1 of Section 4 (Page 4-21). Please explain the spatial separation of the source and the location of the contamination versus the prevailing wind direction.

50) Appendix G, Tank Farm Soil FSP, Section 3.2, Page 28, General Comment

This section should identify and discuss the limitations associated with the downhole radiation logging. Specifically, discuss the expected depth into the sidewall of the boring before self-shielding of the material occurs. It is important to acknowledge the uncertainties associated with the proposed screening method.

51) Appendix G, Tank Farm Soil FSP, Section 3.3.4.1, Page 30

We recommend that if a given critical sample cannot be collected due to risk to personnel health and safety or other reasons, that the Agencies be contacted prior to demobilizing from the tank farm sampling. Doing so will provide an opportunity for the Agencies to devise an alternative sampling strategy.

52) Appendix G, Tank Farm Soils FSP, Section 3.3.4.2, Table 3, Page 31

"*Hydrological properties*" is listed as a Priority "1" sample, yet there is no discussion concerning the collection of this type of sample. Analyses such as Kds can require special sampling methods, depending upon the analytical method to be employed by the laboratory. Please identify, in the text, specifically what analyses will be performed and any special sampling or collection methods for these samples.

53) Appendix G, Tank Farm Soils FSP, Section 3.4, Page 31, Bullet 1

This bullet outlines the intent to “Delineate the horizontal and *lateral* extent of contamination....” Please clarify the intent of this bullet as it is assumed that the horizontal and *vertical* extent of contamination are needed.

54) Appendix G, Tank Farm Soils FSP, Section 3.4, Second Bullet

The text should provide a more detailed discussion of the sampling needs to support the fate and transport modeling .

55) Appendix G, Tank Farm Soils FSP, Section 3.6, Page 32

This section consists of a single sentence but does not provide any information pertaining to “Sampling Location and Frequency.” Please provide information for this topic.

56) Appendix G, Section 4.2, Paragraph 2

The third sentence states that “the hole location may be abandoned in favor of a new location at a nearby position unless the steel casing can be placed safely around the obstacle.” It is not clear why casing would be placed around the obstacle. Rather, it seems more appropriate to place the casing in the hole to stabilize the hole if the casing can be placed adjacent to the obstacle without compromising the integrity of the obstacle if it is a pipeline or other manmade feature.

57) Appendix G, Tank Farm Soils FSP, Section 4.2, Paragraph 3

- a) The intent of this paragraph is not clear with respect to the disposition of the vacuumed soils. It appears that the vacuumed soils will be placed back in the hole but it would appear more logical to place the soils in the annular space between the wall of the hole and the casing, as shown in Figure 6, unless this is the mechanism that will be used for hole abandonment. Please clarify the text describing the placement of the vacuumed soils in the hole.

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- b) It appears that the quality of the activity data with respect to vertical delineation could be compromised if the vacuum excavated soils are replaced back into the hole prior to installation of the geoprobe.

**58) Section 4.3, Page 35**

The text at the top of this page appears to be a continuation of Section 4.3 but the incomplete sentence and disconnect between pages 33 and 35 indicates there is missing text. Please provide the missing text.

**59) Appendix G, Tank Farm Soils FSP, Section 4.5, Page 35, First Paragraph under Section Heading**

We do not agree that the confirmation drum samples should be selected based on random generation. It would seem more appropriate to select the twenty percent based on those samples depicting a range of activities, to see if the analytical results indicate a similar range of radionuclide concentrations.

**60) Appendix G, Tank Farm Soils FSP, Section 4.4, Figures 7 & 10**

The sampling, monitoring locations proposed for sites CPP-27 and -33 are marginal in their spatial coverage. It appears that structures, utilities, and other features adversely affect the ability to get better coverage. Please provide some discussion pertaining to the restrictions associated with drilling in this area.

**61) Appendix G, Tank Farm Soils FSP, Section 7.6, Page 47**

It is unclear how this screening method accounts for radionuclides other than gamma emitters. The DOT process requires the generator to sum all of the radioisotopes present in a sample to determine whether 70 Bq/g is exceeded. The process described will not meet this requirement.

**62) Appendix G, Tank Farm Soils FSP, Section 8.2.3.2, Page 51**

This section references several INEEL procedure, but does not indicate the process to ensure compliance with all DOT regulations for classifying waste.

63) **Appendix G, Tank Farm Soils FSP, Sub-Appendix A**

- a) The table should identify whether these are Phase I or Phase II samples.
- b) It is unclear why the proposed analyses include only CLP metals, gamma spectroscopy, alpha/beta, and Pu isotopes. Other hazardous contaminants such as VOCs, SVOCs would be expected based on process knowledge (particularly in the > 5 foot depth).

64) **Appendix G, Tank Farm Soils FSP, Sub-Appendix B, Table B-2**

- a) Most of these analytes do not appear on the Sampling and Analyses Table in Sub-Appendix A. Please explain.
- b) *No-Longer Contained-In* (NLCI) determinations are made on a case by case basis by the IDEQ Waste Program. To obtain a NLCI determination, the USDOE must submit a written request to the Waste Program demonstrating that the media no longer contains the hazardous waste. Site-specific sampling plans typically accompany the NLCI requests and must be approved by the Waste Program. Review/approval of NLCI requests are not conducted under the FFA/CO. In addition, please note that IDEQ uses the USEPA Region IX Preliminary Remediation Goals (PRGs) when evaluating NLCI requests. Past NLCI determinations used PRGs with a risk factor of  $1 \times 10^{-5}$ . Please delete the columns that describe "Contained-in Risk-based Concentrations."

65) **Appendix G, Injection Well Field Sampling Plan, Section 3, Pages 13-14**

Please see Comment #35, regarding the need for thorough characterization of the CPP-03 (a.k.a. CPP-23) aquifer contamination source area.

66) **Appendix G, Injection Well Field Sampling Plan, Section 4.7, Page 18, Paragraph 2**

Please define the acronym "CTD."

67) Appendix G, Phase I Waste Management Plan, Section 2.2

Please identify the schedule for the test demonstration.

68) Appendix G, Phase I Waste Management Plan, Section 2.3, Page 4, Fifth Paragraph, Third Sentence

The referenced text states that the excavated soil will be contained within a closed loop system to reduce the risk of an air release. Please describe how this will be accomplished (e.g., an air filtration device on the drum to capture and filter the displaced air volume, disposal of any baghouse bags, etc.).

69) Appendix G, Phase I Waste Management Plan, Section 3

Development waters will typically contain more suspended solids than purge waters. Since some contaminants will adsorb preferentially to solids, the development fluids could be more highly contaminated than purge waters, and therefore could present more difficult waste management issues.

70) Appendix G, Phase I Waste Management Plan, Section 3.6, page 6

Please note that 40 CFR 279.22 states that “upon detection of a release of used oil to the environment...a generator must perform the following cleanup steps...(3)Clean up and manage properly the released used oil...”

Spills of used oil must be cleaned up within 24 hours and managed properly regardless of the quantity of used oil which is spilled. Any spill of petroleum which exceeds 25 gallons must be reported to the state, and any spill of petroleum which cannot be cleaned up within 245 hours must also be reported.

71) Appendix G, Phase I Waste Management Plan, Section 4, Pages 8 through 9, last sentence; and Table 4-1, pages 10 through 11

Please note that the hazardous waste determination must address listed waste codes, as well as characteristic wastes. Note that some of the determinations, such as the presence of listed waste in the aquifer associated with the CPP-03

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(a.k.a. CPP-23) injection well, have already been established in correspondence provided to IDEQ from USDOE.

72) Appendix G, Phase I Waste Management Plan, Section 5.1.1

The Waste Experimental Reduction Facility (WERF) is expected to cease operations in the near future. Therefore, the WERF should not be proposed for treatment/disposal of OU 3-14 remediation waste. Please modify the text to describe other management options for these wastes

73) Appendix G, Phase I Waste Management Plan, Section 5.5, Pages 24 through 29

As indicated in Comment #71, hazardous waste determinations for tank farm soils must address listed waste codes as well as characteristic wastes. Based on correspondence provided by USDOE to IDEQ, it has been determined that the SRPA is contaminated with listed waste via the CPP-03 injection well. Any drill cuttings from portions of the aquifer or vadose zone that came into contact with media contaminated by listed waste, must be managed as a listed waste. See also Comment #64 b.

74) Appendix G, Phase I Waste Management Plan, Section 5.5, Page 29

The referenced text describes the potential use of process knowledge to characterize soils prior to shipment a Subtitle C facility or the ICDF. Please note that the extent of characterization required to demonstrate compliance with the ICDF WAC will be determined by the Agencies pursuant to OU 3-13 Group 3 remedial design.

75) Appendix G, Phase I Waste Management Plan, Section 5.7, Second Paragraph under Section Heading

Purge/development waters from wells ICPP-COR-A-173, ICPP-MON-A-174, and/or the CPP-03 (a.k.a. CPP-23) injection well contain listed waste, and therefore must be managed as a hazardous waste. As explained in Comment #64 b, USDOE may choose to submit a NLCI request to the IDEQ Waste Program for a contaminated media. Review/approval of NLCI requests are

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made by the IDEQ Waste Program on a case-by-case basis; these determinations are not conducted under the FFA/CO. An example of minimum characterization requirements that were used to support a NLCI determination for purge waters from selected INTEC wells is documented in the August 21, 2000 letter from B. Monson to D. Wessman regarding *Conditional No-Longer Contain In Determination for the SRPA in the Vicinity of the INEEL INTEC Facility*. Note that this letter was recently clarified with respect to the CPP-03 well.

76) Appendix G, Phase I Waste Management Plan, Section 5.7, Second Paragraph under Section Heading, Last Sentence

Liquid wastes will not be disposed in the ICDF. Depending on whether the purge waters meet (or can be treated to meet) the waste acceptance criteria for the SSSTF evaporation pond, these wastewaters may be discharged to that pond. Please modify the text.

77) Appendix G, Phase I Waste Management Plan, Section 5.8

As indicated in Comment #71, hazardous waste determinations for tank farm soils must address listed waste codes as well as characteristic wastes. Additionally, based on correspondence provided by USDOE to IDEQ, it has been determined that the SRPA is contaminated with listed waste via the CPP-03 injection well. Any fluids used to decontaminate a piece of equipment that came in contact with media contaminated by listed waste, must be managed as a listed waste. See also Comment #64 b.

78) Appendix G, Phase I Waste Management Plan, Section 6.1.2, Page 32, Second complete Paragraph on Page, and Section 6.1.4, Page 33

The paragraph on page 32 states that aisle ways are not planned due to high radiation fields anticipated. However, Section 6.1.4 states that inspections will be conducted to ascertain deficiencies in aisle space. Please clarify.

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79) Appendix G, Phase I Waste Management Plan, Section 6.1.4, Page 33,  
Second Paragraph

Please describe a "*like-new container*" as envisioned for waste storage.

80) Appendix G, Phase I Waste Management Plan, Section 6.1.4, Page 33,  
Third Paragraph

In this Section, container inspections are discussed as being conducted monthly. Later in the Section the inspections are discussed as being conducted weekly. Please clarify. Additional justification is needed for approval of inspections to be conducted on a monthly as opposed to weekly basis.

81) Appendix G, Phase I Waste Management Plan, Sections 7.7 and 7.8,  
Pages 40 through 41

These sections refer to a "*CERCLA Storage Area*," which "*comply with the substantive requirements of 40 CFR 264.53.*" It is assumed that the text is referring to what is now identified as the Staging and Storage Annex (SSA) being designed and constructed pursuant to the OU 3-13 Record of Decision. The OU 3-13 ROD and associated plan documents identify the substantive applicable and/or relevant and appropriate requirements (ARARs) for the SSA. Please modify the text in the referenced sections to reflect use of the SSA and to identify the appropriate OU 3-13 documents where ARAR's for the SSA are outlined.